APRIL/MAY 2024

23UBT11 — CELL AND MOLECULAR DEVELOPMENTAL BIOLOGY

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. List out the functions of cell.
2. Outline any two difference between prokaryotic and eukaryotic cell.
3. What are ribosomes?
4. Illustrate the structure of chromosome.
5. Define replication.
6. Illustrate the central dogma of the cell.
7. What is autocrine signaling?
8. Summarize the significance of mitosis.
9. What are the functions of acrosome?
10. Explain the term organogenesis.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Make use of a diagram to explain the structure of animal cell.

Or

(b) Examine about cell theory.

12. (a) Identify and explain the structure and functions of mitochondria.

Or

(b) Examine the structure and functions of microbodies.

13. (a) Organize the structure and role of different RNA's.

Or

(b) List the characteristic features of genetic code.

14. (a) Choose tight junction and explain its structure and functions.

Or

(b) Analyze about cellular differentiation.

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15. (a) Construct the three phases of oogenesis.

Or

(b) Explain gastrulation in animals.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain in detail the structure of prokaryotic cell.

17. Appraise about the structure and functions of endoplasmic reticulum, lysosomes. (5+5)

18. Explain the mechanism of prokaryotic transcription.

19. Discuss about cell junctions in detail.

20. Elaborate the stages of spermatogenesis in mammals.

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